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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,275	03/04/2002	Nacerdine Azzi	RCA 89433 (PF990009)	8474

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05/13/2003

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EXAMINER

DONG, DALEI

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 05/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/937,275

Applicant(s)

AZZI ET AL.

Examiner

Dalei Dong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/937,275.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show θ_1 and θ_2 in Figures 4a and 4b as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 4 and 5, the phrase "close to" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "close to"), thereby rendering the scope of the claim(s) unascertainable.

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,854,532 to Kuwahara in view of U.S. Patent No. 4,152,685 to Renders.

Regarding to claims 1-6, Kuwahara discloses in Figure 8, a “vertical deflection coil of the deflection yoke device of the third embodiment. As shown in FIG. 8, with respect to the winding of the vertical deflection coil 40, the winding is started from a second smaller arcuate interconnecting portion 42 of a horseshoe-shape at a neck side 23 in parallel to a tube axis plane 22 perpendicular to a tube axis 21, and then the winding proceeds sequentially through one of two second longitudinal portions 43, a second larger arcuate interconnecting portion 44 of a horseshoe-shape at a diverged side 26, and the other second longitudinal portion 43. Then the winding is again made at the second smaller arcuate interconnecting portion 42 at the neck side 23. This winding operation is repeated to form the vertical deflection coil 40” (column 9, line 60 to column 10, line 5).

Kuwahara also discloses in Figure 8, “thus, the vertical deflection coil 40 is constructed such that the two second longitudinal portions 43 are interconnected to the second larger arcuate interconnecting portion 44 and the second smaller arcuate interconnecting portion 42, thus assuming the saddle-like contour, and the second smaller

arcuate interconnecting portion 42 and the second larger arcuate interconnecting portion 44, respectively, are connected generally perpendicularly to the two second longitudinal portions 43” (column 10, line 6-14).

Kuwahara further discloses in Figure 8, “the pair of vertical deflection coils 40 are butted together in such a manner that the second longitudinal portions 43 of these coils 40 are opposed to each other, and positions where the second longitudinal portions 43 are butted together are registered in the peripheral direction with positions where the cores 41 are butted together with their concave sides opposed to each other, thereby assuming a bell of a trumpet. The pair of horizontal deflection coils 17 are butted together with the first longitudinal portions 25 of these coils 17 opposed to each other, and positions where the first longitudinal portions 25 are butted together are registered with the positions of core peaks of the cores 41 in a circumferential direction” (column 10, line 15-27).

Kuwahara further yet discloses in Figure 8, “in the deflection yoke device constructed in this manner, an action of electron beams is generally the same as that of the first embodiment shown in FIGS. 4 and 5. More specifically, the horizontal deflection coils 17 produce a deflecting magnetic field 29, and a region at which the deflecting magnetic field 29 is exerted increases in length progressively from the center of the deflecting magnetic field 29 toward the outer sides, so that an angle θ , at which electron beams are deflected increases, thereby increasing a deflection amount D. Therefore, similar effects as achieved in the first embodiment can be obtained” (column 10, line 28-39).

However, one pair of saddle-shaped coils lies in a radial angular position greater than 5° at least in the front part of the coil. Renders teaches in Figures 2c to 2e, “the prefolded coil is pressed to obtain its ultimate shape in a jig (not shown), the coil-preferably being heated as usual. During pressing the coil is shaped as shown in a plan view in FIG. 2c, in a rear view in FIG. 2d, and in a side elevation in FIG. 2e. These Figures clearly show that the portions of the plane of the turns which are situated on each side of each of the folding lines 17 enclose an angle of substantially 0.degree., so that the turns are arranged one over the other at these areas. The Figures also show that each turn crosses all other turns at the area of the folding lines 17. For example, the turn 13 which was situated completely on the outer side of the coil in FIG. 2a, is still situated on the outer side in the foremost and rearmost portions 19 and 21 (now forming coil heads), but crosses over to the inner side at the transitions between the coil heads and the active sides 23, so that in the side portions it extends along the window 25 enclosed by the coil. Conversely, the turn 9 extends on the inner side along the window 25 in the coil heads, like in FIG. 2a, and along the outer side in the side portions. It is clearly visible that all other turns extend similarly at the folding lines 17 with respect to the window 25, so that at these areas the turns cross each other” (column 2, line 40-63).

Render also teaches “the coil shown in the FIGS. 2c to d is an elementary coil which, when current is conducted therethrough, generates a magnetic field of a shape which is determined by the shape of the coil. FIGS. 3 and 4 show similar elementary coils of a slightly different shape which, consequently, produce other magnetic fields when current is conducted therethrough. For the sake of clarity, the same references have

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been used in all three Figures for corresponding parts of the coils. The indications of the individual turns and the connection wires have been omitted for the sake of simplicity. In some cases a deflection coil can consist of one elementary coil or a plurality of elementary coils of the same shape. The latter is the case if, for example, the conductor constituting the elementary coil is too thin for the desired deflection current. The use of thicker conductors may cause problems during the folding. Therefore, in such a case preferably a number of flat coils are stacked, after which they are prefolded and pressed into the ultimate shape together" (column 2, line 64 to column 3, line 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have construct the vertical deflection coil of Kuwahara with radial angular position greater than 5° according to Renders in order to improve the accuracy of the electron converging on the display screen and enhances a horizontal deflection efficiency, and eliminates a color shift of a convergence at a peripheral portion and an intermediate portion of a tube surface.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following prior art are cited to further show the state of the art of composition of an electromagnetic deflection unit.

U.S. Patent No. 4,464,643 to Meershoek.

U.S. Patent No. 4,749,975 to Tokita.

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U.S. Patent No. 5,166,576 to Roussel.

U.S. Patent No. 5,302,927 to Fourche.

U.S. Patent No. 6,087,768 to Beirens.

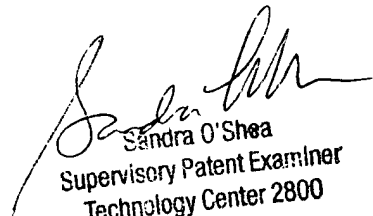
U.S. Patent No. 6,166,484 to Okuyama.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (703)308-2870. The examiner can normally be reached on 8 A.M. to 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703)305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9318 for regular communications and (703)872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

D.D.
May 5, 2003


Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800